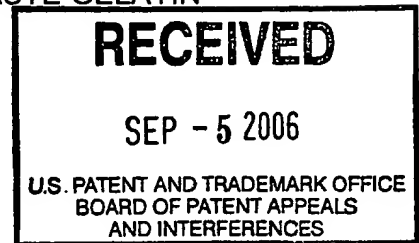


IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Applicant : William J. Schmidt  
 Appeal No. : 2005-2193  
 Serial No. : 09/385,405  
 Filed : August 30, 1999  
 For : METHOD FOR THE PURIFICATION AND  
 RECOVERY OF WASTE GELATIN  
 Examiner : Robert J. Popovics  
 Art Unit : 1723  
 Confirmation No. : 9104  
 Attorney Docket No. : 671.1.002 CIP-3



I HEREBY CERTIFY THAT THIS CORRESPONDENCE IS BEING DEPOSITED WITH THE UNITED STATES POSTAL SERVICE AS FIRST CLASS MAIL IN AN ENVELOPE ADDRESSED TO: BOARD OF PATENT APPEALS AND INTERFERENCES, UNITED STATES PATENT AND TRADEMARK OFFICE, P.O. BOX 1450, ALEXANDRIA, VIRGINIA 22313-1450	
ON	August 30, 2006
NAME	Jill S. Garretson
SIGNATURE	<i>Jill S. Garretson</i>

Board of Patent Appeals and Interferences  
 United States Patent and Trademark Office  
 P.O. Box 1450  
 Alexandria, Virginia 22313-1450

August 30, 2006

REQUEST FOR REHEARING

Dear Sir:

Pursuant to 37 CFR 41.52 Appellant hereby requests a rehearing of the Decision on Appeal dated July 13, 2006. The timing of the Request is proper because the same is being submitted within two months of the Decision on Appeal.

DECISION ON APPEAL

The Decision on Appeal sustained the rejection of claims 71-73, 75-81 and 83 under 35 U.S.C. Section 102(b) and the rejection of claims 71-83 under 35 U.S.C. Section 103(a). The Decision on Appeal overturned the rejections of claims 71-83 under 35 U.S.C. Section 112 paragraph 1.

POINT TO BE CONSIDERED:

In accordance with 37 CFR 41.52(a)(1) the following points are believed to be misapprehended or overlooked by the Board of Appeals:

1. The Schmidt reference (U.S. Patent No. 5,288,408, hereinafter "Schmidt") treats the same or substantially the same starting materials as Appellant (Decision on Appeal, page 4).

2. The process of Schmidt treats "first components" as claimed (Decision on Appeal, page 4).

3. The two-step filtration process including use of a tangential flow filter described in the Schmidt Declaration is not commensurate in scope with the subject matter sought to be patented by claim 71 (Decision on Appeal, page 7).

ARGUMENT:

The present invention is generally directed to a method of treating a waste material containing gelatin. Generic claim 71 provides a critical step in which the solvent based layer is treated by a process that removes a “first component” to form a second liquid containing gelatin having a higher purity than the first liquid because of the substantial absence of the first component. As indicated in step (a) of claim 71, the first component cannot effectively be separated from the first liquid into a non-solvent based layer. Conversely, the first component has an affinity for the solvent based layer. Appellant’s invention provides a novel and efficient method of purifying and recycling the waste material. It is the stated object of the Appellant’s invention to provide not only a method of recovering valuable components from a stream of waste gelatin but also a method of recycling the gelatin in sufficiently pure form so that it may again be used for useful products such as soft gelatin capsules (Application, page 5, lines 3-12).

If a recyclable gelatin suitable for this purpose is to be achieved, then undesirable waste materials or contaminants and particularly the “first component” must be removed from the waste gelatin stream before the gelatin can be recycled. Since the first component cannot be effectively separated from the first liquid into a non-solvent based layer, it must be removed directly from the solvent based layer.

Any component which can be effectively separated into the non-solvent based layer is not a "first component" as that term is used in claim 1.

Schmidt Does Not Treat The Same Or Substantially  
The Same Starting Materials Because A First  
Component Is Not Present In The Solvent Based Layer.

Schmidt discloses a method of recycling gelatin-based encapsulation waste material through a process for the recovery and purification of gelatin (Schmidt-Abstract; and column 2, lines 16-20).

Schmidt specifically describes the composition of the particular waste materials obtained from the encapsulation process at column 1, lines 41-47:

In general, waste material of encapsulation processes are comprised of a variable number of components added to a gelatin base. Among them are solvents (usually water); softening agents and oil coatings (when desired) and contaminants in the form of residual active ingredients (the substance to be encapsulated). In addition, colorings and preservatives may also be added.

These same materials are described again beginning at column 3, line 8. In addition to the presence of a softening agent, active ingredients such as oils (e.g. vitamin A) are mentioned as well as coating oils like mineral oil used to coat the outer surface of the gel capsule. Coloring agents and preservatives are mentioned as well.

These are the only waste materials disclosed in Schmidt. These waste materials are then dispersed when the lower aqueous phase is separated from the upper oil phase.\* These waste materials associate with the upper oil phase, not with the lower aqueous phase as indicated below:

It should be noted, incidentally, that the upper phase may contain the lubricating or coating oils, active ingredients, coloring and preservatives described above which may themselves be subject to certain novel recycling techniques (Schmidt, column 4, lines 9-13).

Thus, the only waste materials disclosed in Schmidt are waste materials which have an affinity for the upper phase and not the lower phase. There is no teaching or suggestion in the reference of any waste material that cannot effectively

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\* The lower (aqueous) phase referred to in Schmidt is the equivalent of the solvent based layer referred to in Appellant's claims when water is used as the solvent. The upper (oil) phase is the equivalent of the non-solvent based layer.

be separated into the non-solvent based layer. This is because all of the waste materials are associated with and are part of the non-solvent based layer. Accordingly, the waste materials described in Schmidt are not "first components" as that term is used in Appellant's claims.

The object of the Schmidt invention is to provide for the efficient separation of gelatin and glycerin from the waste (Schmidt, column 4, lines 13-15). The gelatin and glycerin, of course, are retained in the lower aqueous phase. The contaminants including active ingredients therefore are found in the upper oil phase (non-solvent based layer).

. . . the remaining components on the upper phase will similarly have a greater degree of purity. The subject invention, therefore, provides a method for more efficient recovery of active ingredients (Schmidt, column 4, lines 15-18).

Thus, Schmidt teaches that the contaminants are found in the upper phase (non-solvent based layer) and may be separated from the upper phase to recover inter alia the active ingredients.

There is no disclosure in Schmidt of any waste material that cannot effectively be separated from the first liquid into a non-solvent based layer.

To the contrary, Schmidt discloses contaminants associated with the non-solvent based layer and their desirable removal therefrom to recover the active ingredients. Because there is no disclosure of any other type of waste material, there is no disclosure in Schmidt of a first component as that term is used in Appellant's claims. The statement in the Decision on Appeal that any component that remains in the lower aqueous layer after separation facilitated by a site glass is a "first component" is erroneous. The mere presence of a trace amount of the waste material of Schmidt in the lower aqueous layer does not render such waste materials "first components". A first component must not be effectively separated into a non-solvent based layer. The waste materials in Schmidt clearly are effectively separated into the non-solvent base layer because they have an affinity for such layer. Conversely, the disclosed waste materials do not have an affinity for the lower phase which contains the solvent. It therefore follows that Schmidt does not teach a gelatin waste stream containing a first component. Accordingly, Schmidt does not teach the same or substantially the same starting materials as Appellant.

The Process Of Schmidt Does Not  
Treat First Components As Claimed:

The Decision on Appeal states that Appellant's argument ignores the further disclosure in the next paragraph of Schmidt (column 4, beginning at line 22) that the lower phase is not filtered to "remove any remaining traces of oil or other contaminants". Appellant disagrees.

The key disclosure at column 4, lines 22-31 is reproduced below:

Next, the lower phase is not filtered to remove any remaining traces of oil or other contaminants. Stainless steel filtration equipment may be employed such as a plate filter, or a coated plate filter like, for example, a Sparkler filter. Alternatively nutche filters of the Rosenmund type or cartridge filters may be used for the purpose. Here again, the residue may be recaptured for further separation and purification if desired although the amounts involved at this point may not warrant the effort. (emphasize supplied)

The first sentence of the quoted description poses two questions relevant herein. First, what oil and other contaminants in trace amounts are being removed from the lower phase? Second, how did these contaminants get to the lower phase?

As indicated above, the only contaminants referred to in Schmidt are those associated with the upper phase (Schmidt, column 4, lines 9-13). There are no other contaminants referred to in Schmidt and specifically there are no first components taught or suggested.



How then did the contaminants (associated with the upper phase) get into the lower phase? These contaminants are the result of the imperfect separation process used to separate the lower phase from the upper phase (Schmidt, column 4, lines 1-3; Brief on Appeal, page 20). The imperfect separation process would be expected to leave trace amounts of the contaminants in the lower phase.

Schmidt then removes the contaminants (associated with the upper phase) from the lower phase with filters particularly suited for this purpose including cartridge filters (Schmidt, column 4, lines 22-28). While these filters are effective in removing the non-solvent based contaminants they are ineffective in removing first components as will be addressed below in connection with the Schmidt Declaration.

Before discussing the Schmidt Declaration, it should be noted that after the lower phase is treated by stainless steel filter equipment (e.g. cartridge filter), the resulting filtrate is essentially contaminant free. The only remaining procedure performed on the filtrate is dewatering which increases the concentration of the gelatin contained within the filtrate by removing some of the water solvent (Schmidt, column 4, beginning at line 32). After obtaining a desired concentration of gelatin, the gelatin is ready for recycling (Schmidt, column 4, line 64 to column 5, line 9).

At no time subsequent to filtration using a cartridge filter (or similar equipment) is there any further filtration step disclosed to remove any other type of

contaminant. Thus, Schmidt does not treat first components as claimed because the waste gelatin stream taught by Schmidt does not contain them.

The Schmidt Declaration Shows That  
The Schmidt Waste Gelatin Stream Did  
Not Contain First Components.

As discussed above, the use of cartridge filters in Schmidt was for the purpose of removing trace amounts of spillover, non-solvent based contaminants from the lower phase. After removal, the lower phase essentially contained purified recyclable gelatin free of contaminants.

The Schmidt Declaration was made of record to show that the Schmidt process as exemplified by the use of cartridge filters is ineffective in removing a first component from a waste gelatin stream. The Schmidt Declaration beginning at paragraph 10 describes testing a waste gelatin stream containing gelatin, glycerin and a single contaminant, vitamin E acetate (a first component because it can not effectively be separated into the non-solvent based layer). The test procedure employed a cartridge filter to see if the specific type of filtering system taught by Schmidt could remove the first component from the lower phase. It did not, as evidenced by the milky white appearance of the resulting filtrate due to the presence of a significant amount of the first component (Schmidt Declaration, paragraph 11).

Schmidt therefore does not describe a process of removing first components from the lower solvent phase and the Schmidt Declaration conclusively shows that the filter equipment employed by Schmidt cannot perform this function. What then is the composition of the gelatin waste stream disclosed in Schmidt? Since the gelatin waste stream was purified and recyclable after treatment with a cartridge type filter, and since cartridge filters cannot remove first components from a waste stream, a priori the Schmidt waste stream does not contain a first component.

The same waste gelatin stream was treated in the same manner with a cartridge filter to obtain the same milky white filtrate. However, in accordance with Appellant's invention, the milky white filtrate was then treated in a manner which "removes the first component from the solvent based layer" as required in claim 71. This was accomplished through the use of a tangential flow filter as specifically recited in claim 74.

The Two-Step Filtration Process Including  
The Tangential Flow Filter Is Commensurate  
In Scope With The Subject Matter Of Claim 71.

Claim 71 requires that the solvent based layer be treated with a process which removes the first component. The tangential flow filter removes the first component (vitamin E acetate) from the lower phase to produce a recyclable product suitable for the making of soft gel capsules (Schmidt Declaration paragraphs 12-14).

The cartridge filter taught by Schmidt does not remove the first component as evidenced by the milky white appearance of the filtrate. Appellant therefore submits that it is not reasonable to conclude that the process of Schmidt is treating first components because a) there is no disclosure of first components in Schmidt and b) the Schmidt filtration system cannot remove first components as established by the Schmidt Declaration. Tangential flow filters are representative of systems disclosed in Appellant's application suitable for removing first components from the lower phase (claim 74).

Claim 71 requires that the solvent based layer contain a first component and that the solvent based layer be treated to remove the first component. The gelatin waste stream of Schmidt does not contain a first component and Schmidt does not disclose any method of removing a first component from the solvent based layer. Accordingly, the rejection of claims 71-73, 75-81 and 83 under 35 U.S.C. Section 102(b) in view of Schmidt is in error and withdrawal of the same is deemed proper and is respectfully requested.

Likewise, the rejection of the same claims under 35 U.S.C. Section 103(a) in view of Schmidt should be withdrawn. It cannot be considered obvious to add a step to a process to remove a contaminant when the contaminant is not present in the reference starting material. One of ordinary skill in the art would not seek to remove a first component by any method when no such first component is present in the waste stream. After having treated the lower phase with certain filter equipment (e.g.

cartridge filter) using the Schmidt reference, the skilled artisan would have obtained a contaminant free filtrate. Nothing further needed to be done except to remove some of the solvent (water) to obtain a concentrated recyclable product. There was no motivation provided to the skilled artisan to further treat the “contaminant free” filtrate to remove a first component which clearly did not exist.

The rejection of claims 74 and 82 under 35 U.S.C. Section 103(a) over the combined teachings of Schmidt and Dutre cannot be sustained as well.

Claim 74 limits step(c) to the use of a tangential flow filter. However, there was no motivation on the part of the person of ordinary skill in the art to use a tangential flow filter when the gelatin waste stream (of Schmidt) did not contain a first component. If no first component was present, the skilled artisan would not have looked beyond Schmidt to obtain a contaminant free recyclable gelatin product.

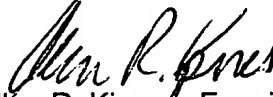
Claim 82 refers to the use of ultrafiltration to remove the softening agent (e.g. glycerin) from the second liquid. The second liquid is the liquid which is formed after the first component has been removed from the solvent based layer [claim 71, paragraph (c)]. As explained above, Schmidt does not disclose a gelatin waste stream containing a first component and therefore provides no motivation for the treatment of the first liquid to remove the first component. Accordingly, the combination of Schmidt and Dutre does not render claim 82 obvious, because Dutre

does not cure the deficiency of the primary reference, namely, the absence of a first component in the waste stream.

Appellant submits that claims 71-84 define a patentable invention over the prior art of record and request the withdrawal of the existing rejections under 35 U.S.C. Section 102(b) and 103(a). The Decision on Appeal having ruled that Appellant was in possession of the claimed process and has enabled those of ordinary skill in the art to make and use the same (Decision on Appeal, page 7), it is respectfully submitted that the appealed claims are allowable and such action is respectfully requested.

It is believed that no fee is due in connection with this matter. However, if any fee is due, it should be charged to Deposit Account No. 23-0510.

Respectfully submitted,



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